AI and the Future of Care Work

The Rise of the AI Caregiver

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EXECUTIVE SUMMARY

Life expectancy for the 65+ is lengthening into mid-80s and for some even longer. While many older adults may thrive in their later years, it is likely that as individuals age, some will need more care-related services. These needs may be a result of chronic illness, disability, vision or hearing loss, or mobility limitations. The care providers that will serve this group will be drawn from families, healthcare, private duty home care, senior living (Independent and Assisted), as well as Skilled Nursing Facilities (SNF).

In parallel with the aging of the population there is a well-documented shortage of workers that provide or contribute to care. This shortage came into sharp focus during Covid-19 as professionals of all types left their jobs – today, many have not returned. Burnout among healthcare providers is well-documented; turnover has worsened across senior care organizations – and some care providers may turn away work or schedule patients far into the future.

At the same time, more care work is migrating away from institutions and into the home, driven by preferences of both care recipients and families, institutional costs, and patient frustration with access. As that happens, more tech-enabled services are now available from providers and tech vendors offering 'Healthcare in Place.' Opportunity has emerged for AI's machine learning features that help care providers by capitalizing on larger and even unstructured data sets like text and notes to support detection or prediction of possible problems.

Emerging offerings such as virtual sitters in hospitals, AI-enabled medical documentation, diagnostic algorithms, avatars and voice-enabled chatbots are promising tech improvements that today augment work and fill gaps in care. However, there are limitations and barriers to broader adoption that will need to be overcome. These include perceived trust issues, lack of data integration across boundaries, and the role of government regulation. But even as the product possibilities and implications are not yet fully understood, the next five years will bring better definition, expanded capability and growing adoption.

WHO SHOULD READ THIS REPORT?

- **Investors and funds that focus on older adults**
- **Senior living organizations**
- **Professional home and health care companies**
- **Vendors within or considering entry into the remote care technology categories**
- **Technology platform providers and resellers**
- **Telecommunication carriers and network service providers**
- **Social services and non-profits with focus on older adults**
- **Healthcare professionals**
- **Pharma and med tech companies**
- **Consumer goods and services**
- **Other companies marketing to older adults and caregivers**

ACKNOWLEDGEMENTS

Companies that interact with patients earlier in the care continuum are well positioned to capitalize on AI while avoiding disruption. In addition to diagnostics, monitoring technology stands out as another potential area for investment. For example, medical technology (medtech) that collects data from devices could identify abnormalities and recommend treatment. AI could analyze patients' vital signs and results from preventative screenings to detect, recommend treatments, and continuously monitor glucose levels, or cardiac and neurological health. – Morgan Stanley, August 2023

ALL CARE-RELATED INDUSTRIES FACE HEADWINDS IN 2023

Healthcare, Home Health Care, Home Care, Senior Living, SNF

The US population is aging and will be needing more care. You read it every day in the popular press – the bad news about the 65+ and their future care burden and the good news about the 65+ and their wealth (22% of US spending in 2022). Even with wealth, older adults at some point in their lives will need some level of assistance. This report is focused on their potential care needs, including health care, and the dwindling availability of people to do that work, with the workforce assisted or augmented in the future by Artificial Intelligence software (see **Figure 1**). This Andreesen Horowitz graphic suggests:
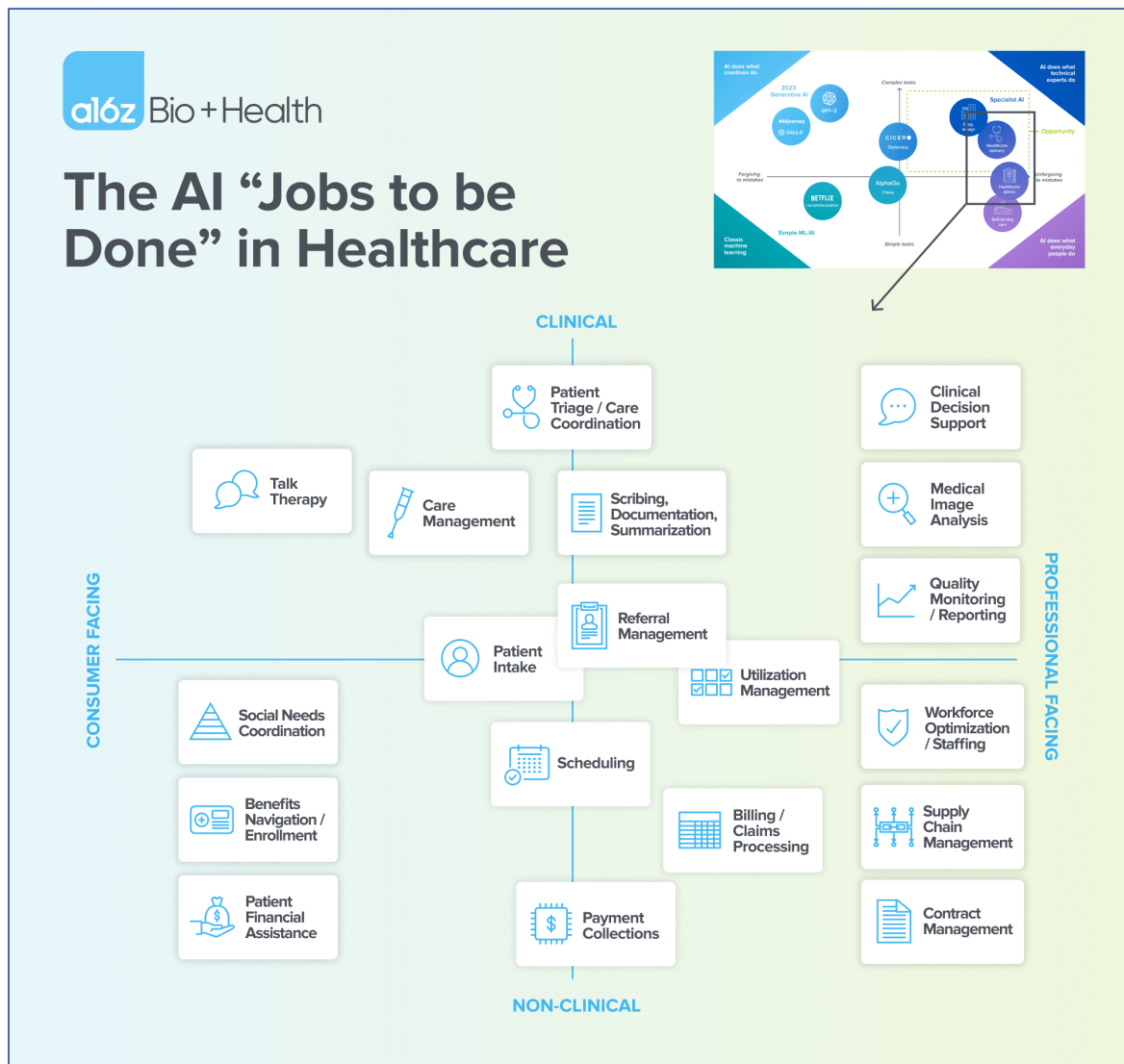

Figure 1 The AI "Jobs to be Done" in Healthcare   **Source:** Andreesen Horowitz

- **Baby boomers will all be 65+ by 2030.** Twenty percent of the 65+ population continues to work. But factoring in a long-standing decline in fertility, as the number of social security beneficiaries grows, the number of workers per social security beneficiary continues to shrink (see **Figure 2**). The implication, much discussed, is that the Social Security Trust Fund will run out of money and that Social Security benefits will have to be curtailed.
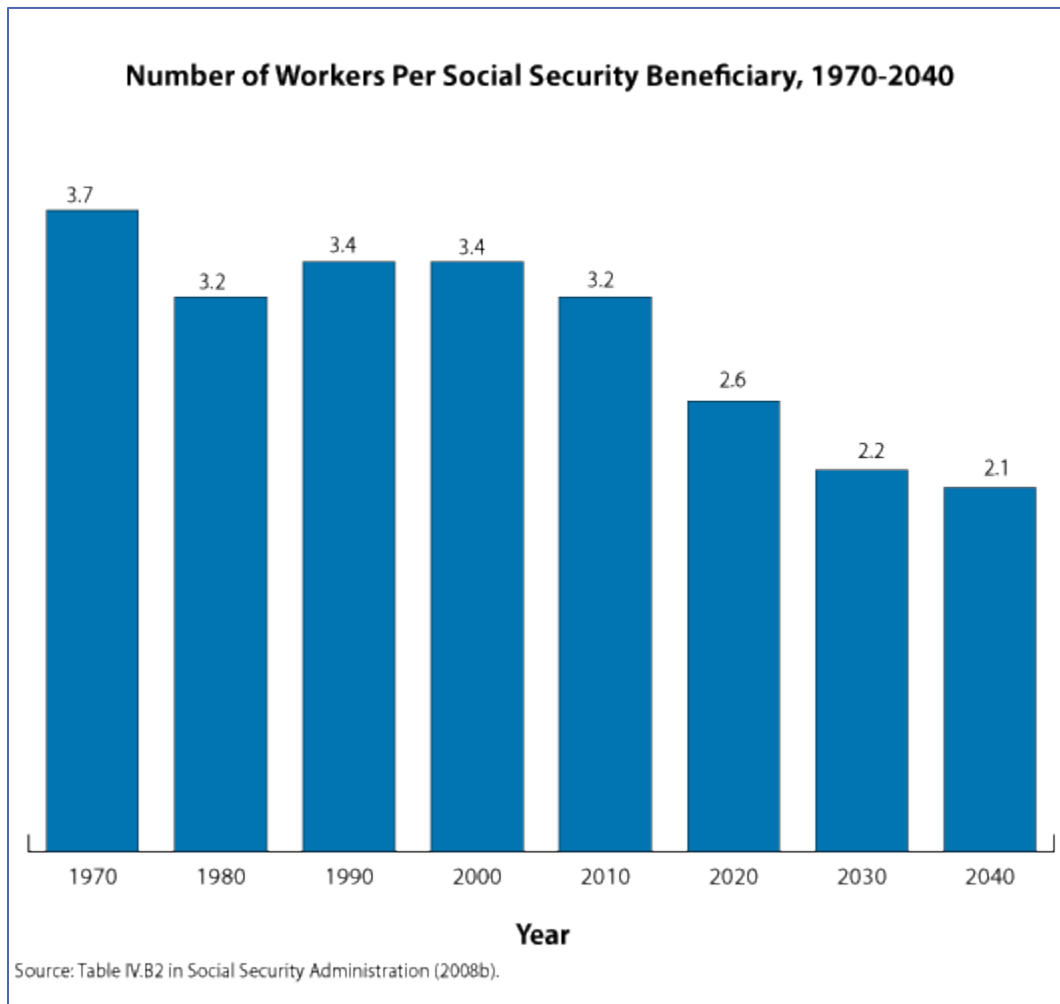

Figure 2 Workers Per Social Security Beneficiary 1970-1940   **Source:** SSA

- **Meanwhile life expectancy extends 20 years past the so-called retirement age.** The probability of living to age 85 is now 55% for a 65-year-old male, and 65% for a 65-year-old female. Life expectancy at 75, however, is almost another 11 years for healthy men, 13 years for healthy women – requiring a longer term plan for housing, health care, transportation and other support systems. And older workers are not necessarily retiring – 19% of the 70 to 74-year-olds are working today; that percentage is expected to grow.

The care needs of the oldest can be significant

The likelihood of some types of disability increases with age, which can limit mobility, self-care and household activities (see **Figure 3**). Older adults may suffer from:

- **At least one chronic illness.** Over 85% of US adults aged 65+ suffer from at least one chronic illness, with 65-75% having 2 or more. More than 13% of the 75-84 have dementia. And over a third of older adults aged 85+ have Alzheimer's. Age-related macular degeneration impacts 20 million people in the US and is a 30% risk for the 75+, who may have disabling hearing loss, increasing social isolation and risk of dementia.
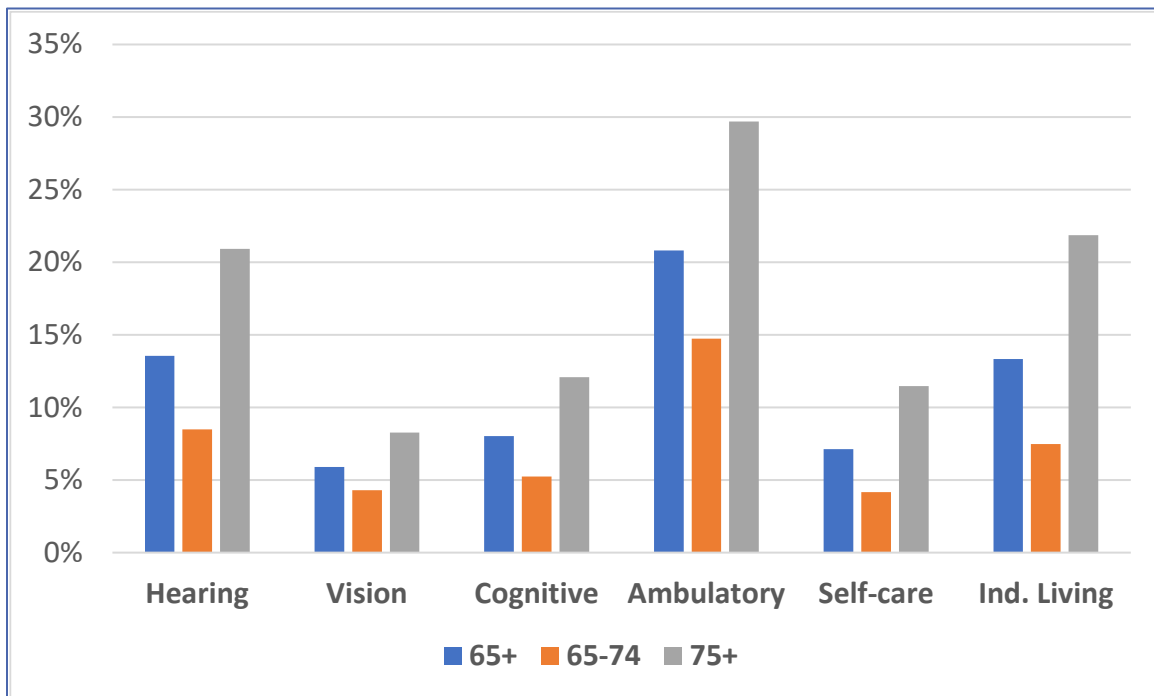

Figure 3 Disability Prevalence Increases with Age   **Source:** ACS 2022

- **At least one disability.** Some 46% of Americans ages 75 and older and 24% of those ages 65 to 74 report having a disability, according to estimates from the Census Bureau's 2022 American Community Survey (ACS). These can include difficulties with walking, living independently, or cognition. Adults aged 75 and older and those ages 65 to 74 are the most likely to report having an ambulatory disability (30% and 15%, respectively).

- **Mobility limitations.** According to a study in BMC Geriatrics, more than 50% of individuals at age 85 have at least one mobility limitation. In fact, one in five older adults aged 65+ no longer drives, although they may have driver licenses (see **Figure 4**). That limitation, more prevalent among women than men, places a burden on family caregivers, as well as dependency on transportation services in addition to home care.
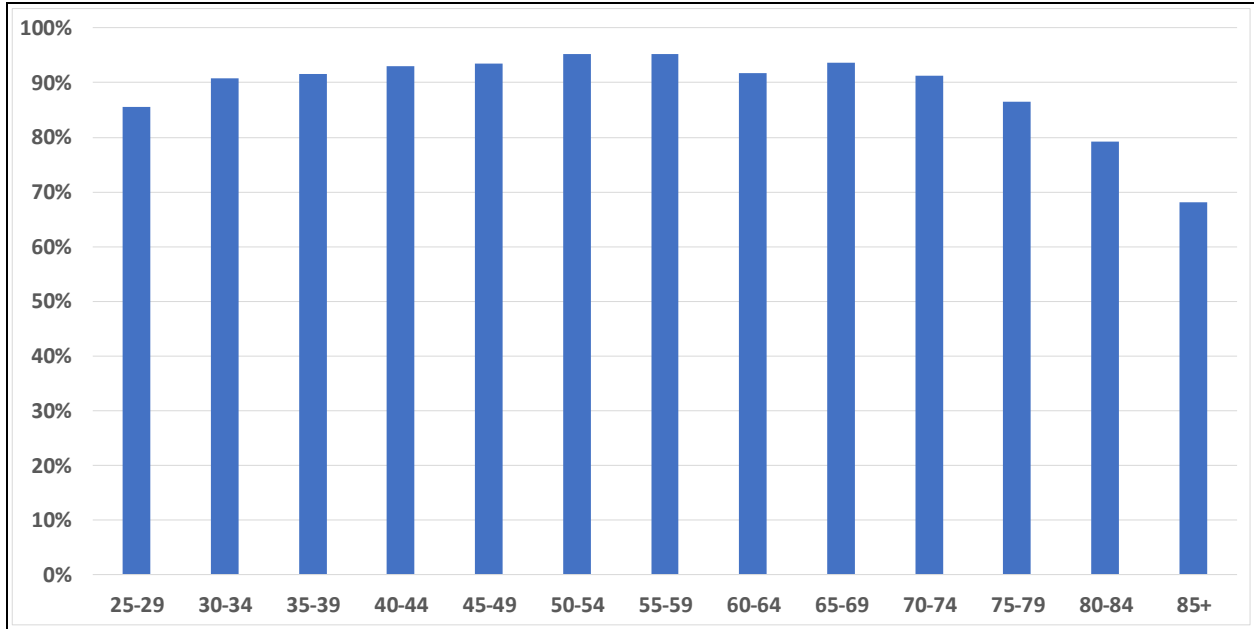
Figure 4 Share of Adults Who are Licensed   **Source:** DOT, US Census

Labor shortage impact felt across all care types

There is a worsening labor shortage in all care categories. Covid-19 was one of the triggers that pushed workers towards the exit. For health care professionals, however, frustration and a desire to leave the profession have been building for years. Some say that this followed the 2010 Affordable Care Act which mandated electronic medical records, leading to a myriad of new tasks across multiple systems, adding barriers to care. Whatever the reason, today:

- **Physicians and nurses are burning out.** Although the problem is not new, it is getting worse. Two-thirds of doctors and nurses say they are experiencing moderate or a great deal of burnout at work. According to one report, 53% of physicians reported burnout, with ER doctors the most at 65%. Burnout drives them out of the profession, contributing to shortages, especially in rural areas or regions with fast-growing populations.

- **Turnover is high in the lowest-paid positions in care.** Pay pressure is emerging in industries identified as the lowest paid. While BLS shows a national Certified Nursing Assistant average wage of $14.56 per hour, depending on location, some now pay $19/hour. This job category includes aides in home care (turnover of 77%), senior living (turnover of 43%), and nursing homes (turnover of 55%) (see **Figure 5**).

  "Separate out the caregivers – operational from clinical. They will feel empowered, manage themselves better, get to know their staff. Also understand that with CNAs, without a career path, they see themselves as a commodity." – Charles Turner, **KARE**
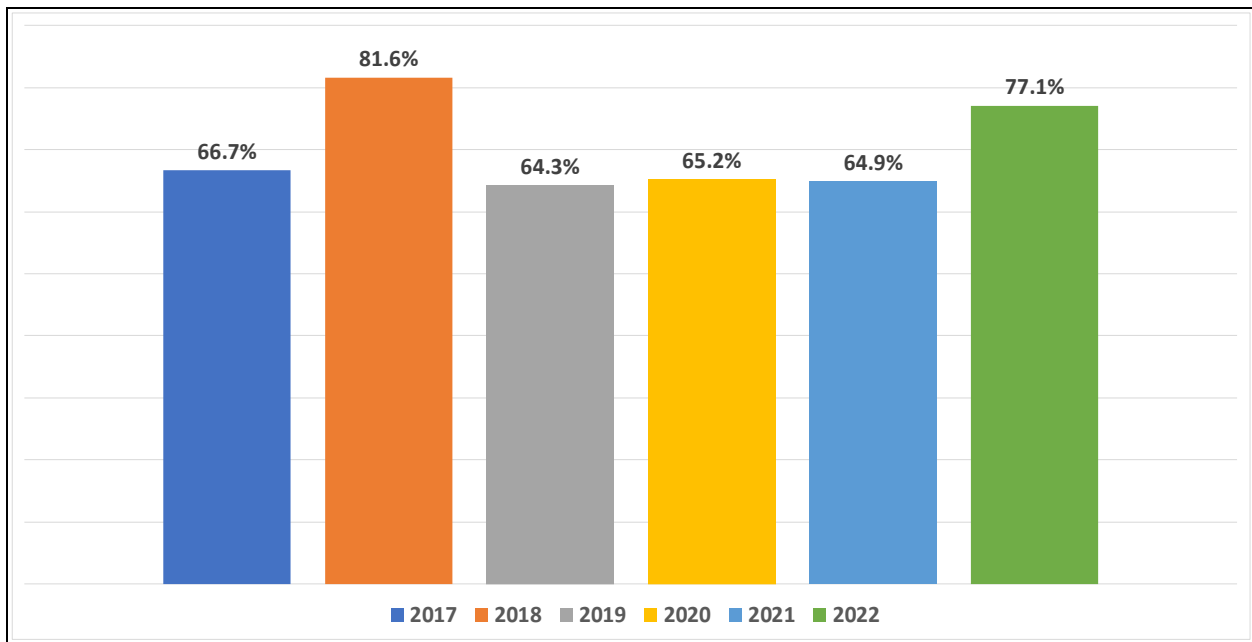
Figure 5 After a 3-Year Dip, Home Care Turnover Rate Jumped to 77% in 2022 **Source:** Home Health Care News

- **Pressure mounts in senior living to 'keep people well', boosting burden of care.**
  Assisted living communities care for residents that are older and sicker. Jobs to care for
  them have become more physically difficult as care needs increase. The rate of obesity
  among nursing home residents has grown to at least 1 in 4 residents, and these residents
  have a greater risk of a complications that must be treated.

 *"55+ communities are starting to look like Independent Living. Independent living residents are
the age of what used to be the norm for Assisted Living. AI and technology will play a part in this
evolution."* **– Michael Abcunas, Securitas**

Healthcare Delivery is Migrating Away from Hospitals

As care delivery and consumer expectations change, the traditional fee-for-service model has
already morphed into the new era of health-care consumerism – a patient-organized mix of self-
care, urgent care, and in-home care, avoiding emergency rooms or long wait for a doctor visit.
More seniors used telehealth at home during the pandemic – and today:

- **Consumers are all in on self-diagnosis and care**. Older adults seek information online
  about health symptoms – this likely does not boost anxiety about their conditions as much
  as mitigate it. Self-diagnosis is increasingly prevalent among the 93% of consumers with
  access to the Internet. Between 60 and 80% of adults have searched online for health
  information. Self-care at home after a diagnostic visit is growing, including tracking
  blood pressure, glucose and respiratory status.

- **Patients are frustrated with health care access.** According to a 2023 Experian survey
  report, these frustrations are a result of inability to schedule an appointment quickly, use
  a mobile device to schedule, or expect more digital options to manage their care.
  Patient burnout is a growing issue – long waits, short appointments, large bills – pushing
  people towards telehealth interactions as a first step. Meanwhile providers in that same
  survey noted that staffing shortages prevented them from providing better access.

- **Health risk identification moves away from institutions to the pharmacy and home.**
  Telehealth represents only 5% of healthcare claims, with utilization concentrated on
  mental health and hypertension ranking high on the list of claims. Today 11,000 urgent
  care centers are in suburbs and cities across the US, staffed by nurse practitioners and
  physician's assistants. Still, 80% of what happens to our health happens outside a medical
  setting. Consider the pharmacy's Higi Station (founded by Khan Siddiqui) for checking
  blood pressure, a measurement that can shock a consumer.

    *"Finding out that you have hypertension is like going to your bank and finding out that
    your account is all zeros."* -- Khan Siddiqui, **HOPPR.AI**

- **Home care growth projections are inversely proportional to worker availability.**
  Aging in place preferences drive demand for private duty home care and home health.
  Executives confirm that they are turning away 25% of prospective clients due to lack of

workers to provide care. BLS projects 22% job growth outpacing all other occupations. And while demand and costs are up – availability of workers is down. Most states are increasing Medicaid payment rates for home-and-community-based services to respond to the shortage. And the supply-demand problem extends to the booming home health market as well (see **Figure 6**).
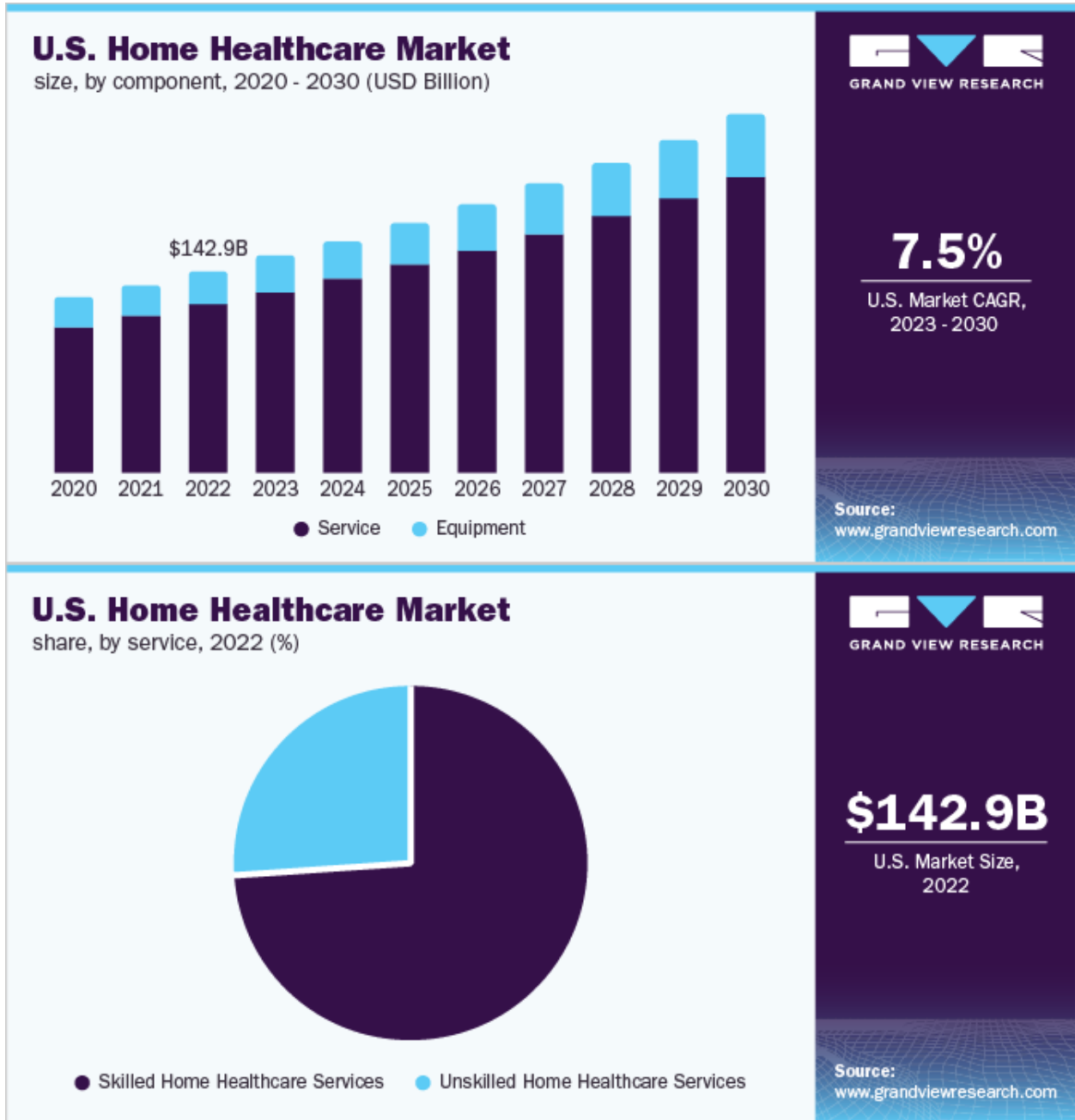
Figure 6 Home Healthcare Services Market Size Through 2030 **Source:** Grand View Research

Move From Institutions Enables Tech Change – And Vice Versa

New tech enables shifting of care locations and tech underpinning of care work. The crisis in staffing across all care settings has enabled vendors and care providers to rethink their work processes. It has launched new trends, including a growing percentage of agencies that offer both home health and private duty care. If a technology solution can identify which care constituents need more care than others – the rationale for right-care-right-place can be cost-justified.

- **Care in the home will replace care in the hospital.** Companies and insurers see the necessity – and opportunity – to migrate more health-related care to the home. Best Buy Health and the Geek Squad are delivering tech services to enable in-home health services. Consider Dispatch Health, which brings the entire ER care experience into the home. There is also growth in use of Hospital-to-home, telehealth-enabled diagnosis and services, as well as greater interest in self-care tools used by consumers.

  "The move to value-based care delivered in the home, 'Healthcare in Place', is gaining traction – many hospitals have shown 3 years of negative margins." – Jane Sarasohn-Kahn, **THINK-Health**

- **Senior living organizations may want AI metrics to help offer tiered pricing.** Organizations want to use staff more effectively. AI-based analysis of how time is spent on individuals could be a factor in making the case for remote health monitoring, virtual sitters, and even tiered pricing based on verifiable care requirements.

  "This technology could help answer questions about raising the price of care. For example, if your Mom needs more care and we have to visit her room more than others, facilities might use that data to justify a higher charge." – Carolyn Sun, **Hunter College**

- **AI-enabled offerings may detect issues while older adults still live independently.** Today 24x7 monitoring from AI systems like Caspar.ai or CareDaily can detect changes that can be addressed during the independent living stage. LifeGuardHealth recently launched a new concierge care service that includes a local nurse providing tech-assisted care oversight from CareDaily.

  "An 'AI caregiver' can fill in blind spots in 24x7 care settings and can predict a hospitalization event up to 7 days in advance." David Moss, **CareDaily**

TECH OFFERINGS EMERGE TO IMPROVE CARE, ASSIST WORK

It was just one year ago that the launch of ChatGPT kickstarted the revitalization of interest and excitement about AI. As the initial hype and fear recede, practical possibilities become viable and accepted. It's feasible to transform care work using AI, especially the care of older adults both inside and outside of institutions (see **Figure 7**). Why?

- **Large data sets enable prediction and problem avoidance in care settings.** High quality data is becoming the backbone of machine learning and predictive analytics. Unlike data that is scraped from the Internet by ChatGPT or Bard, this data can be specific to a company or organization's ecosystem – including the previous behaviors of a caller or contact that can drive the most appropriate response.

  "We have thousands of PERS calls per day. We have taken all that data about the calls to derive intent of an interaction, offering context for what workers may be stepping into." – Tyler Tribe, **Becklar**

- **Sensors are moving 'deeper' into the home and care.** Instead of simple motion sensors found in early activity monitoring, today's AI technology can be coupled with a smart home's Wi-Fi sensors, supporting family and professional care workers, enabling detection of patterns and change in moisture, sound, voice, temperature, absence of movement, or alert about events and patterns that may be worrisome.

- **The concierge voice chatbot removes the burden from staff.** Faced with turnover or a shortage of workers, senior living organizations want to take the front office burden off their staff, optimizing their employees through the use of voice and online chatbots that can answer simple questions via telephone, Internet or at the front desk.

  "We use Alexa to supplement staff, answering simple questions like what events are happening today, what's for dinner? But it can also call for help." – Chris Nall, **Atria Senior Living**

- **AI can help offer appropriate responses, so caregivers can focus on care delivery.** Using data supplied to an app, the caregiver doesn't have to read a long social history and critically think how to synthesize knowledge about the person into their approach. In the case of dementia care, they can find ready responses that match the circumstance of the moment with an appropriate approach.

  "Families enter data about a person which then informs as many as 600 non-pharmacological interventions and approaches that can be used by direct care workers or family caregivers. – Juliet Holt Klinger, Ella Platform, **TapRoot Interventions and Solutions**

"We see what LLMs can do to make sure it is a better experience for clients and their families. You are leaving a loved one in our care, so deep connections and personalization will augment the capacity offered." – Preeti Kaur, **HonorCare**

- **AI has utility in training highly paid staff.** AI is already in use for helping practitioners identify the difference between normal and abnormal X-Rays or provide assistance in interpreting Electrocardiograms. In addition, a new AI offering, Hippocratic.ai, helps train medical professionals using rich data simulations of patient interactions, including using these to improve skill at taking medical histories.

- **Training low-paid staff is becoming systematized and moving online.** Some entrepreneurs during Covid focused on addressing the problem with turnover of Certified Nursing Assistants (CNAs)**,** the lowest-paid staff with the highest turnover, by offering online training and tools to add skills to a role that they find personally rewarding.

"During Covid, we trained 305,000 people to be temporary nurse's aides. Our goal is to build a ladder so starting at CNA is step one in a rewarding career pathway." – John Reinhart, Partner & President of Academic Platforms dba **CNAOnline**
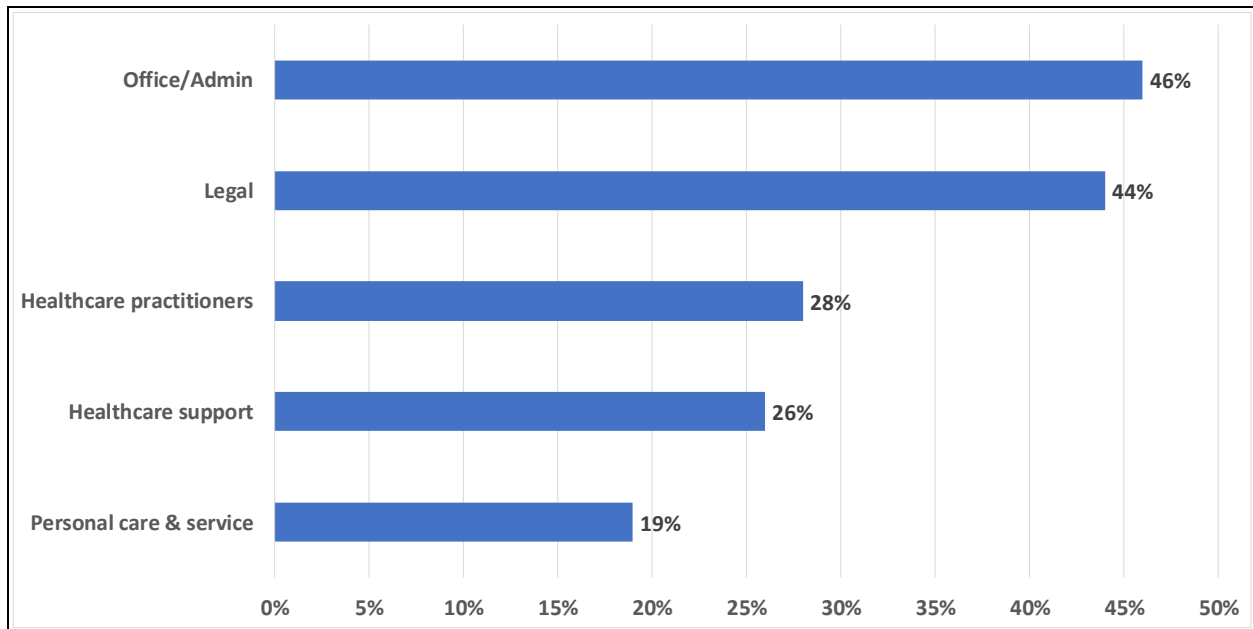
Figure 7 Care-related Employment Exposed to AI (June, 2023) **Source: Visual Capitalist**

THE RISE OF THE AI CAREGIVER

AI and other tech will fill in caregiving blind spots

The concept of an 'AI Caregiver' may seem futuristic. But given staffing shortages today, it is feasible and works. AI analysis is derived from cameras, sensors, or voice patterns on the front lines of care, alerting staff to issues based on patient health status and history. Consider that:

- **Virtual sitters can replace a hired person at the hospital bedside.** Using audio and visual 'telehealth' monitoring, virtual sitter technology can supplement, or depending on the circumstance, replace having a person assigned to sit 24x7 at the bedside of at-risk patients – at a far lower cost.

- **In-person nursing can be supplemented with remote monitoring, app-based care.** One approach is using an off-hours model for flexible and remote work, deploying telehealth methods to monitor wound care, for example. The wound can be viewed remotely, and the patient can be offered instructions by a wound care specialist.

- **Shifting roles of nurses can improve both quality of job and quality of care.** With so many nurses leaving the profession, opportunities are improving for the role of nursing care coordinator, particularly for patients with diagnoses such as diabetes, asthma, or heart failure.

  "So many nurses are sitting on the sidelines looking for a better work situation than traditional hospital care. A nurse care coordinator is a new opportunity that nurses see as a valuable and viable career alternative." – Nat Findlay, **LifeGuard Health**

- **HIPAA-compliant chatbots replace strain on front office reception or call centers.** By asking appropriate questions tailored to an individual's health situation, the responses can be used to verify a regimen or make suggestions based on the patient's response.

  "We see Voice Health having an algorithm across many of our members. After the blood pressure check, it can ask if they took their water pill, preventing a trip to the ER." – David Laiderman, **Veterans Home Care**

- **A voice-controlled robotic table can enable independence.** Robots have long been discussed in elder care, but most have failed to deliver on their promise. However, one AI-enabled technology, Labrador Systems 'Retriever' is unique in its capabilities to map routes in a home for a voice-enabled robotic table that can help minimize effort by those with mobility limitations.

  "This technology can help reduce home care visit frequency by enabling individuals to control their environment, moving laundry, bringing water and other tasks that typically depend on people." – Kerry Huffman, **Labrador Systems**

AI Will Augment and Assist Families and Care Professionals

AI technology has become particularly appealing to save labor across industries. Initial uses in healthcare have focused on augmenting a workforce, especially for tasks that are repetitive and take away from the ability of licensed professionals to operate at the top of their license. And in addition, it augments that last supply of workers to do work that no one wants to do. Whether it is assisting with reading X-Rays or medical tests, electronically scribing medical notes, or offering conversational chatbots, AI and machine learning tech has the potential to be of great benefit in care settings as:

- **AI-enabled documentation streamlines administrative labor.** Replacing human (and potentially poorly trained) medical scribes with AI tech has already become viewed as an improvement in transcription quality. It is fast becoming a lucrative field for startup companies like Abridge or Hint Health or established companies like Nuance DAX, DeepScribe and now Amazon's AWS HealthScribe. Assistance with charting in healthcare settings would be another notable improvement.

  "We need to help the nursing staff. Charting is part of a long, busy day – could it be made more efficient? – Judy Collett-Miller, **Parker Life**

- **Algorithms can find undiagnosed diseases early.** Instead of attempting to see all patients, healthcare providers moving forward can more easily identify and discuss appropriate/available treatments. In the future, they may be able to focus precisely, using AI technology to triage care, first treating those patients at highest risk or use it to better match patients for clinical trials.

  "Wouldn't it be great if patients calling in for help were the ones that needed help the most? Schedule the patients flagged by algorithms, catching them farther upstream at clinics that can schedule for follow-up." – Glenn Ricker, **Lucem Health**

- **AI can be used to analyze unstructured data.** By many estimates, 80% of healthcare data is unstructured content (see **Figure 8**). More AI tools are entering the market that can review unstructured text such as medication orders or previous visit notes. Unstructured data can also include tracking a consumer's food, activities, or mood. Or providers may use chatbots to help prepare patients for their upcoming appointments.

  "A human can examine five charts an hour – AI can analyze 100,000 per minute." – Sahar Arshad, COO, **Cloudmedxhealth.com**

- **AI can enable a new category of 'proactive care in skilled nursing facilities.'** Most care historically has been reactive – it follows the occurrence of a fall, a wound, or an illness. TapestryHealth sees an opportunity to create a new category, a platform that integrates data and tech to predict future changes in resident health status.

"Our AI technology relies heavily on EHR data, nurses' notes, medical histories, and medications. This is paired with contactless vital sign remote monitoring to meet the fundamental criterion of proactivity." – Mordy Eisenberg, Co-Founder, **TapestryHealth**

- **AI can help replace one-size care plans with personalized care plans and responses.** Data-driven AI tools can tackle the problem of too many or inappropriate notifications in care settings by enabling health profiles and records to determine the right next action.

  "Incorporating patient conditions into AI enables appropriate action, reducing alert fatigue. If a patient with hip replacement surgery attempts to leave the bed, it is an imminent fall, but a person with an arm problem can get up and go to the bathroom." – Ashutosh Saxena, **Caspar.ai**

- **'Empathetic' machine learning emerges.** AI tools and chatbots can ask questions and obtain answers that help providers and family caregivers understand how a patient is feeling or whether they are declining over time. One example, MemoMate, is a new AI conversational tool to capture life stories and memoirs that can also be a source of changes in health status over time.

  "We found that the tool offers insights about how an individual is feeling or whether they are showing signs of cognitive decline or assist with cognitive improvement." – Raphael Rubens, **MemoMate**

- **AI-enabled devices will adapt to and assist persons under care.** Frontiers in Computer Science recently launched a request for papers that examine the Machine Learning opportunities for improvement in assistive technologies – specifically seeking papers about improving prediction from gestures for example, or analyzing and deciphering expressions, communications, and visual behaviors.

  "ÁI systems will emerge in devices such as autonomous wheelchairs, adaptive environments, self-adjusting windows or HVAC – and can include specialized robots." – Chia-Lin Simmons, **LogicMark**

Figure 8 Unstructured Data in Healthcare   **Source:** Gaines Solutions

The Barriers to Benefit are Daunting

Trust issues are top of mind – mistakes in care will be blamed on algorithms. Despite high rate of diagnostic and well-publicized medical error rates, introducing AI into health systems will be as slow or slower than other tech introductions. Barriers include:

Concern about trustworthiness. Public trust in AI lags well behind the degree of innovation already reached by multiple care-related organizations. The trust issue partly results from media highlighting issues with AI, such as hallucinations in responses, or well-documented examples of misuse. Further complicating adoption, there are newly-published government efforts to regulate AI, with a focus on making it safe, secure and trustworthy coupled with comments from innovators that underscore concerns about trust (see **Figure 9**).

Most Americans who have heard of AI don't trust companies to use it responsibly and say it will lead to unease and unintended uses

*Among those who have heard of artificial intelligence, % who say they **trust companies to use AI responsibly** ...*

A great deal/Some: 24
Very little/Not at all: 70
Not sure: 6
No answer: <1
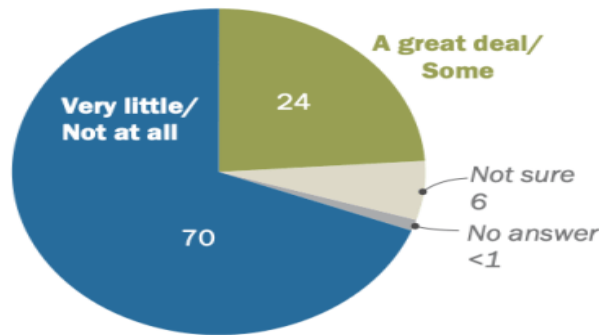
*Among those who have heard of AI, % who say that as companies use AI to collect and analyze personal information, this information **will** be used in ways that ...*

People would not be comfortable with: 81
Were not originally intended: 80
Could make people's lives easier: 62

Note: "Definitely/probably will happen" are combined. Figures may not add up to 100% due to rounding. Those who did not give an answer or who gave other responses are not shown.
Source: Survey of U.S. adults conducted May 15-21, 2023.
"How Americans View Data Privacy"

PEW RESEARCH CENTER

Figure 9 Consumers Do Not Yet Trust Organizations to Use AI Appropriately
**Source: Pew Research October, 2023**

- **Definitions are not appropriate for multiple care settings.** Today experts note a lack of syntax and semantic definition of care work. This could improve accuracy of responses in senior care settings especially, where it is still early for broad AI utilization and executives are cautious.

  "We can create a complete plan of care in seconds, all aspects, for an 85-year-old man who had a total knee replacement. But we're not using it until best practices, appropriate governance and fine tuning are incorporated into AI models – enabling validation on the back end." – Scott Collins, **Link•age**

- **Continuum of both care AND data across locations is still a future.** Today's care transitions still depend on people, telephones, and hand-carried media, despite the broad implementation of EMR systems and records. Deployed versions are still not standardized across different corporate hospital settings, let alone shared with home care, home health care or nursing homes (see **Figure 10**). New information blocking rules have just been announced that could help with interoperability.

  "We have pathways to navigate EMR –the ones that are needed will extend outside the hospital you have just left." – Jerry Campbell, **EY**
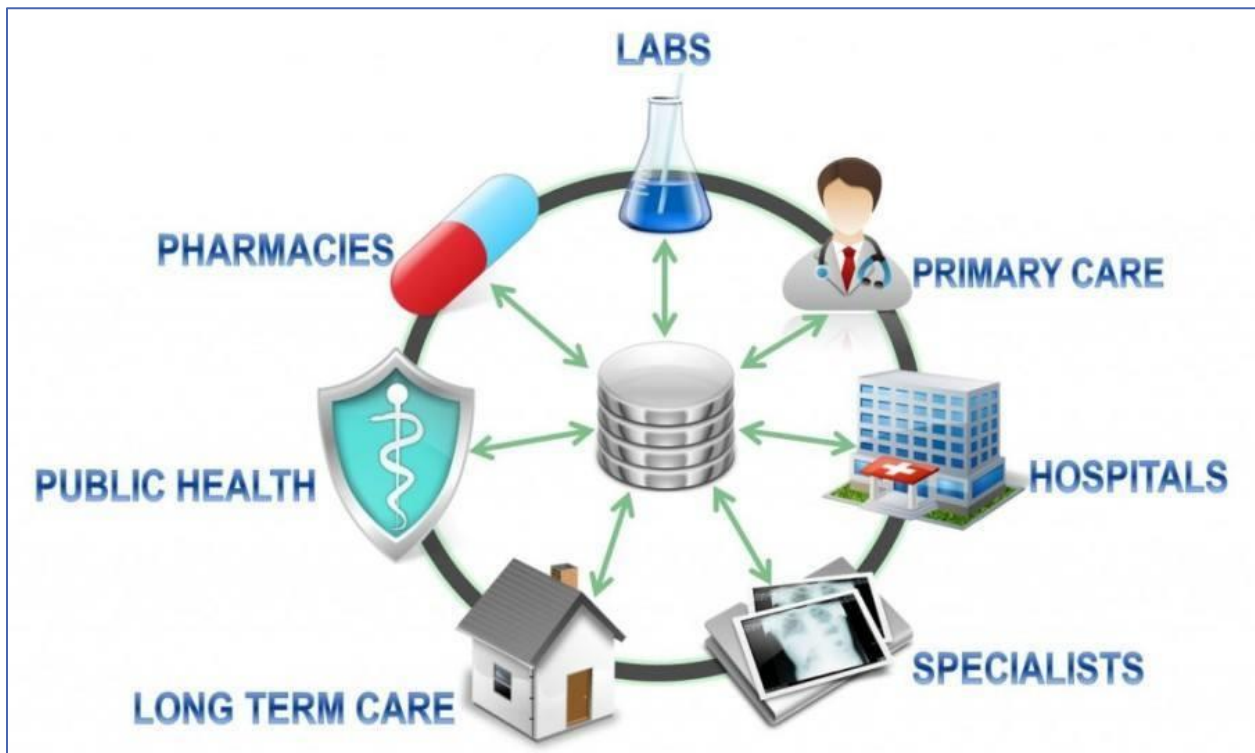
Figure 10 Interoperability Needed for Care Work   **Source: CareCloud.com**

FUTURE OF AI AND CARE WORK

Necessity will drive AI usage in care work across all five care types (healthcare, home health care, home care, senior living, and SNF). Issues of worker shortage, staff burnout, or migration of care work into the home will result in broader deployment of AI technology (whether explicit or inside other software tools). And regulatory initiatives will help overcome trust issues for consumers. Over the next few years, care organizations will make more disciplined use of their own data that an AI technology can access or present to a caregiver. What changes are most likely within the next five years?

The care continuum will become a data-driven reality for just-right care. Rather than force a patient to carry their records from care location to location, the standardization and exchange of electronic medical records will see a boost from the use of AI software tools. Senior housing providers, including nursing homes, will incorporate AI to learn about the care recipient before their arrival – helping them to assemble a profile that can support the delivery of just-right care. And they will use AI technology to manage and compare overall community performance.

"We want to distill information from signals we have about wellness, creating a score for that community, and bubble it up for operators to see how a community is doing." – **Navin Gupta, LifeLoop**

Population health will transform into a population of one. The term 'population health' evolved over many years to encompass all population groups and all factors that influence health outcomes. In the next five years, the only population that matters in predicting specific outcomes will be the population of one, the care consumer. The benefits will depend on AI tools that combine standardized medical records, unstructured text interactions, and multiple data sources that can be combined into a health profile (see **Figure 11**).

"In the future, AI can consume transcription, EMR data -- a digital Doppelganger based on historical data – all of that text is the fuel for understanding." – Alan Pitt, **VitalChat**

Avatars are emerging built on health protocols and voluminous data sets. An avatar, or a computer-generated representation of a responder to a request, such as customer service provider, can be used to enable meaningful healthcare interactions for a patient or portal user, for example. Behind a well-trained avatar, there can be a wealth of information to drive the interaction – enabling empathetic responses in multiple languages.

"Behind each care.coach avatar are evidence-based and data-driven protocols. It reacts to a new complaint – a person is severely depressed or there is an intruder in the home." – Victor Wang, **care.coach**

Medicare Advantage consumers will increasingly expect a smooth digital experience.
Unlike financial industry customers, health plan customers have had low expectations. Only a
quarter of those in a recent survey expected a well-functioning website that answered their
questions about benefits or permitted updating personal information. But as with all business
services, that is likely to change over the next few years, as conversational AI and chatbots
become incorporated into the user experience and extend beyond seniors and their caregivers to
include their adult children and grandchildren.

*"Our founders of subsidized housing for seniors intended to offer supportive services onsite,
covered by insurance. Under development with an academic partner is a companion robot that
can predict mood and provides data to scientists."* – Diana Delgado, **Eaton Communities**

Payors will reimburse to keep people well. As Medicare Advantage penetration expands
beyond 51%, the plans' offerings will begin to focus on ways to keep consumers healthy, or at
least healthier over time. To do so, these plans will depend on data collected from a variety of
sources and be analyzed with AI tools. Over the next five years, those data sources will help
reward healthcare providers based on 'Value-based payments' such as containing the cost of care
per individual patient.

*"AI can consume transcription, EMR data, historical data, and text. The combination becomes
the fuel for improving care."* – Alan Pitt, **VitalChat**

Today's Care use of tech and AI	Future Care use of tech and AI
Patient data is locked within care silos, communicated with difficulty	AI tools will enable patient data to span care continuum boundaries
Senior housing operators begin ramp up of data use	Senior housing operators will optimize offerings based on data
One size chatbots becoming ubiquitous	Chatbots initiate topical conversations based on the user
Avatars barely in use	Avatars will increasingly be used to offer health-related guidance
Insurers are largely unaware of patients' digital lives outside portal	Insurers will use AI to personalize the user experience in portals
Insurance pays for services	Insurance pays to keep people well
Remote monitoring detects events	Remote monitoring detects patterns
Limited broadband access for seniors	Ubiquitous broadband across all settings
Consumers are concerned about AI trustworthiness	Regulatory efforts will help boost consumer trust in AI

Figure 11 The Future Care Use of AI and Technology

Organizations Offering Insights Used in Report

KARE
Becklar
Eaton Senior Communities
Veterans Home Care
Lucem Health
CNA Online
LifeGuard Health
Labrador Systems
Care.coach
TapRoot
Caspar.ai
EY
Atria Senior Living
Securitas Healthcare
Hunter College
Parker Life
VitalChat
Care Daily
HOPPR.AI
MemoMate
LifeLoop
HonorCare
LogicMark
Link-age Connect
THINK-Health
Tapestry Health

Resources

Morgan Stanley: How Artificial Intelligence Could Reshape Health Care

The Holding Company: The Corporate Guide to the Care Economy

KFF: Payment Rates for Medicaid Home- and Community-based Services

Medscape: RN & LPN Compensation

McKinsey: Digital Engagement Now Typifies the Medicare Advantage Experience